of a network node, said network node being at an end of a signal line pair that includes parallel signal lines for conducting at least one of an incoming and outgoing signal, said parallel signal lines terminated at the network node side with an interface module, said interface module containing via a bridge circuit data transmitted through said parallel lines;

immediately countering a line failure error via a provided interface module redundancy; and

transmitting at least one of line failure messages and interface failure messages between interface modules of incoming and outgoing parallel signal lines in each of network nodes via a selector and at least one of an error message link and a transmission link.

Rule 1.126

5.

4. A method according to claim 3, wherein the interface modules are being regarded as line components when the selector selects at least one of the parallel signal lines and the signal line pair through which data are forwarded.

Rule 1.126

6.

3. An apparatus for optimizing transmission security and failure security in high-bit-rate data networks via signal line redundancy between network nodes, such that parallel signal lines, selectors, bridge circuits, and interface modules provided at a network node side are capable of at least one of being occupied and being switched to at least one of a working mode and a protection mode, said apparatus comprising:

at least two interface modules being part of network nodes, each of said at least two interface modules stands in direct connection with a signal line pair that includes parallel signal lines for conducting at least one of an incoming and outgoing signal,

a bridge circuit for routing data coming from a processing unit to the at least two interface modules,

a selector, incoming data present at an output side of said interface module reach the processing unit via said selector, said at least two interface modules always contain via said bridge circuit data that are transmitted via said signal lines, said selector selects via a change over between at least one of a working line